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1-191. (canceled)

192. A method for assessing cell surface glycans, the method comprising:

(a)(i) incubating a test composition comprising a plurality of cells under conditions to release one or more glycans from the surface of cells in the test composition, wherein a sample comprising one or more cell surface glycans is generated and (a)(ii) determining the presence, absence, identity and/or level of glycans present in the sample, thereby assessing the cell surface glycan profile of the sample; or

(b) determining the presence, absence, identity and/or level of glycans present in a sample, thereby assessing the cell surface glycan profile of the sample, wherein the sample comprises one or more glycans released from the surface of cells present in a test composition comprising a plurality of cells after incubation of the test composition under conditions to release the one or more glycans.

193. The method of claim **192**, wherein cells in the test cell composition comprise whole cells or intact cells.

194. The method of claim **192**, wherein the test cell composition comprises between 1×10^6 cells and 5×10^6 cells, inclusive.

195. The method of claim **192**, wherein the test cell composition comprises a concentration of between 1×10^5 cells/mL and 1×10^8 cells/mL, inclusive, between 1×10^6 cells/mL and 5×10^7 cells/mL, inclusive, or between 5×10^6 cells/mL and 2.5×10^7 cells/mL, inclusive.

196. The method of claim **192**, wherein the incubation is carried out in the presence of an N-glycosidase.

197. The method of claim **196**, wherein the N-glycosidase is a peptide N-glycosidase (PNGase) F.

198. The method of claim **197**, wherein the PNGase F is recombinant.

199. The method of claim **197**, wherein the PNGase F comprises a PGNase F of *Flavobacterium meningosepticum*, or a portion or mutant thereof that is enzymatically active.

200. The method of claim **197**, wherein the PNGase F comprises the amino acid sequence set forth in SEQ ID NO: 1 or a portion or mutant thereof that is enzymatically active, or an amino acid sequence that exhibits at least 85%, 86%, 87%, 88%, 89%, 90%, 91%. 92%. 93%, 94%, 95%, 96%, 97%, 98%, 99% or more sequence identity to SEQ ID NO:1 or is a portion thereof that is enzymatically active.

201. The method of claim **197**, wherein the PNGase F comprises the amino acid sequence set forth in SEQ ID NO: 1.

202. The method of claim **197**, wherein the amount of PNGase F is 1 unit to 5000 units, inclusive.

203. The method of claim **192**, wherein the incubating the test composition is for an amount of time that between or between about 5 minutes and 12 hours, 30 minutes and 6 hours or 1 hour and 3 hours, each inclusive.

204. The method of claim **192**, wherein the incubating the test composition is at a temperature between 25° C. and 39° C. or between 35° C. and 39° C.

205. The method of claim **192**, wherein, prior to the determining the presence, absence, identity and/or level of glycans present in a sample, the method further comprises labeling glycans from the sample with a detectable label.

206. The method of claim **205**, wherein the detectable label is a fluorescent label and the fluorescent label is or comprises 2-aminobenzamide (2-AB), 2-aminobenzoic acid (2-AA), 2-aminopyridine (PA), 2-Aminoacridone (AMAC), 2-aminonaphthalene trisulfonic acid (ANTS), and 1-aminopyrene-3,6,8-trisulfonic acid (APTS), 3-(Acetylamino)-6-aminoacridin (AA-Ac), 6-Aminoquinoline (6-AQ), 7-Aminomethyl-coumarin (AMC), 2-Amino (6-amido-biotinyl) pyridine (BAP), 9-Fluorenylmethoxycarbonyl (FMOC)-hydrazide, 1,2-Diamino-4,5-methylenedioxy-benzene (DMB), or o-Phenylenediamine (OPD).

207. The methods of claim **206**, wherein the fluorescent label comprises a carbamate tagging group, a quinolone fluorophore, and a tertiary amine.

208. The method of claim **192**, wherein, prior to determining the presence, absence, identity and/or level of the one or more glycans, the sample is subjected to glycan purification or enrichment.